

CLAIMS

1. A mounting structure for mounting an on-vehicle circuit unit on a vehicle body, the on-vehicle circuit unit comprising: a circuit board having a power circuit; and a heat radiating member having an inner surface to which the circuit board is fixed in a state of enabling heat conduction, and an outer surface functioning as a heat radiating surface, wherein the on-vehicle circuit unit is mounted on the vehicle body in such a state that the heat radiating member faces the body with a clearance.
2. The mounting structure for mounting an on-vehicle circuit unit according to claim 1, wherein the on-vehicle circuit unit is mounted on the body such that the body and the outer surface of the heat radiating member face each other in a substantially parallel state.
3. The mounting structure for mounting an on-vehicle circuit unit according to claim 2, wherein the size of the clearance formed between the outer surface of the heat radiating member and a body surface is in the range of 3mm and 20mm.
4. The mounting structure for mounting an on-vehicle circuit unit according to claim 1, wherein the heat radiating member has a mounting part which is to be fixed to the vehicle body in a state that the mounting part is in contact with the vehicle body, and the outer surface of the heat

radiating member, except the mounting part, faces the vehicle body with a clearance, in a state that the mounting part is fixed to the body.

5. The mounting structure for mounting an on-vehicle circuit unit according to claim 4, wherein the mounting part of the on-vehicle circuit unit is fixed to an inner surface of an engine room of the vehicle body in a state that it is in contact with the inner surface.
6. The mounting structure for mounting an on-vehicle circuit unit according to claim 4, wherein the mounting part is fixed to a bottom surface of an engine room of the vehicle body in a state that the mounting part is in contact with the bottom surface.
7. The mounting structure for mounting an on-vehicle circuit unit according to claim 4, wherein a bolt insertion bore is provided in the mounting part and the mounting part is fixed to the vehicle board by means of a metal bolt which is inserted into the bolt insertion bore.
8. The mounting structure for mounting an on-vehicle circuit unit according to claim 4, wherein a step is provided between a surface of the mounting part which is to be in contact with the vehicle body and an outer surface of the heat radiating member, such that the outer surface of the heat radiating member, except the mounting part, faces the body with a clearance in a state that the mounting part is fixed to the body.

9. The mounting structure for mounting an on-vehicle circuit unit according to claim 4, wherein the on-vehicle circuit unit is mounted on the vehicle body in a state that the mounting part faces upward.
10. The mounting structure for mounting an on-vehicle circuit unit according to claim 1, wherein the outer surface of the heat radiating member of the on-vehicle circuit unit and a surface of the body facing each other both have a radiance between 0.7 and 1.00.
11. The mounting structure for mounting an on-vehicle circuit unit according to claim 1, wherein the on-vehicle circuit unit is incorporated in a common electric connection box together with other circuit components in a state that the heat radiating member is exposed to the exterior, and the entire electric connection box is mounted on the vehicle body.
12. A mounting structure for mounting an on-vehicle circuit unit on a vehicle body, the on-vehicle circuit unit comprising a circuit board having a power circuit, and a heat radiating member having an inner surface to which the circuit board is fixed in a state of enabling heat conduction, and an outer surface functioning as a heat radiating surface, wherein the on-vehicle circuit unit is mounted inside an engine room of the vehicle body in a state that the heat radiating member faces a surface of a battery provided inside the engine room, with a clearance being formed

therebetween.

13. The mounting structure according to claim 12, wherein the on-vehicle circuit unit is incorporated in a common electric connection box together with other circuit components in a state that the heat radiating member is exposed to the exterior, and the entire electric connection box is mounted to a vehicle board.
14. An on-vehicle circuit unit comprising a circuit board having a power circuit, and a heat radiating member having an inner surface to which the circuit board is fixed in a state of enabling heat conduction, and an outer surface functioning as a heat radiating surface, wherein the heat radiating member has a mounting part which is to be fixed to a vehicle body in such a state that it is in contact with the vehicle body, and a step is provided between a surface of the mounting part which is to be brought into contact with the vehicle body and the outer surface of the heat radiating member so that the outer surface of the heat radiating member, except the mounting part, faces the vehicle body with a clearance, in a state that the mounting part is fixed to the vehicle body.
15. The on-vehicle circuit unit according to claim 14, wherein the surface of the mounting part which is to be in contact with the vehicle body and the outer surface of the heat radiating member are substantially parallel to each other.

16. The on-vehicle circuit unit according to claim 15, wherein the clearance formed between the surface of the mounting part which is to be in contact with the body and the outer surface of the heat radiating member has a dimension within a range of 3mm to 20mm.
17. The on-vehicle circuit unit according to claim 14, wherein the heat radiating member is formed of a metal plate, and the mounting part extends from an edge of the metal plate with the step.